

CLAIMS

1. A method for reducing potential for substance abuse in skin-worn transdermal patch devices containing residual amounts of abusable substances of interest after removal from a first user comprising a step of causing said
5 abusable substance of interest that remains in a patch device as removed from a first user to contact a separately stored anti-abuse substance selected from the group consisting of binding agents which immobilize and deactivate
10 said abusable substance, co-soluble antagonists, irritants and combinations thereof thereby reducing the potential for abuse.

2. A method as in claim 1 wherein said anti-abuse substance includes a binding agent that prevents extraction
15 of said abusable substance of interest using a solvent selected from the group consisting of water, ethanol or combinations thereof.

3. A method as in claim 1 wherein said anti-abuse substance includes a binding agent that includes activated
20 carbon.

4. A method as in claim 1 wherein said anti-abuse substance includes an amount of an antagonist.

5. A method as in claim 3 wherein said anti-abuse substance includes an amount of an antagonist.

25 6. A method as in claim 1 wherein said anti-abuse substance includes an amount of an irritant.

7. A method as in claim 3 wherein said anti-abuse substance includes an amount of an irritant.

8. A method as in claim 1 wherein said abusable
30 substance is an opioid.

9. A method as in claim 8 wherein said abusable drug includes a compound of fentanyl.

10. A system for reducing potential for substance abuse in skin-worn transdermal patch devices containing residual amounts of abusable substances after administration to a first user comprising:

- 5 (a) a disposable container having an opening therein to receive a skin-worn patch device containing a residual amount of an abusable substance therein;
- (b) a layer containing an amount of an anti-abuse substance selected from the group consisting of
10 binding agents for said abusable substance in said patch device, co-soluble antagonists, irritants and combinations thereof, said layer being disposed in said container in a manner such that a skin-worn patch device properly inserted into said
15 container will cause said abusable substance to contact said layer containing said anti-abuse substance; and
- (c) closure means for closing said container containing a used skin-worn patch device.

20 11. A system as in claim 10 wherein said anti-abuse layer contains a binding agent that prevents extraction of said abusable substance of interest using a solvent selected from the group consisting of water, ethanol or combinations thereof.

25 12. A system as in claim 10 wherein said anti-abuse substance includes activated carbon.

 13. A system as in claim 11 wherein said anti-abuse substance includes activated carbon.

30 14. A system as in claim 10 wherein said anti-abuse substance includes an amount of an irritant.

 15. A system as in claim 10 wherein said anti-abuse substance includes an amount of an antagonist.

16. A system as in claim 10 wherein said container is in the form of a flexible pouch.

17. A system as in claim 10 wherein said closure device includes an adhesive seal.

5 18. A system for reducing potential for substance abuse in skin-worn transdermal patch devices containing residual amounts of abusable substances after administration to a first user, said system comprising:

10 (a) an anti-abuse layer containing an amount of an anti-abuse substance for said abusable substance in said patch device selected from the group consisting of binding agents for said abusable substance in said patch device, co-soluble antagonists, irritants and combinations thereof disposed in said patch device;

(b) a layer containing an amount of said abusable substance in said patch device spaced from said layer containing said anti-abuse substance;

15 (c) a separator membrane situated between said layer containing said amount of said anti-abuse substance and said layer containing said abusable substance preventing contact therebetween; and

20 (d) a connector means for automatically removing said separator membrane from said patch upon detachment of said patch from a user thereby allowing the anti-abuse layer and the abusable substance layer to become engaged.

25 19. A system as in claim 18 wherein said anti-abuse layer contains a binding agent that prevents extraction of said abusable substance of interest using a solvent selected from the group consisting of water, ethanol or combinations thereof.

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20. A system as in claim 18 wherein said anti-abuse substance includes activated carbon.

21. A system as in claim 19 wherein said anti-abuse substance includes activated carbon.

5 22. A system as in claim 16 wherein said anti-abuse substance includes an amount of an irritant.

23. A system as in claim 18 wherein said anti-abuse substance includes an antagonist.

10 24. A system as in claim 18 wherein said connector means for automatically removing said separator membrane includes a device that adhesively attaches to the skin of a user and pulls said separator from said patch upon detachment of said patch from a user.

15 25. A method for reducing potential for substance abuse in skin-worn transdermal patch devices containing residual amounts of abusable substances of interest after removal from a first user comprising steps of:

- 20 (a) providing an amount of an anti-abuse substance maintained separated from said abusable substance of interest;
- (b) causing said abusable substance of interest that remains in a patch device as removed from a first user to contact said anti-abuse substance; and
- 25 (c) wherein said anti-abuse substance is selected from the group consisting of binding agents which immobilize and deactivate said abusable substance, co-soluble antagonists, irritants and combinations thereof.

30 26. A method as in claim 25 wherein said anti-abuse substance includes a binding agent that prevents extraction of said abusable substance of interest using a solvent selected from the group consisting of water, ethanol or

combinations thereof.

27. A method as in claim 25 wherein said anti-abuse substance includes a binding agent that includes activated carbon.

5 28. A method as in claim 25 wherein said abusable substance is an opioid.

29. A method as in claim 28 wherein said abusable drug includes a compound of fentanyl.

10 30. A method as in claim 25 wherein said anti-abuse substance is stored in a pouch and step (b) involves inserting a removed patch into the pouch.

15 31. A method as in claim 25 wherein said anti-abuse substance is stored in a layer separated by a removable membrane from the abusable substance and wherein in step (b) removing the patch causes the membrane to be removed and the abusable substance to contact the anti-abuse substance.

32. A method as in claim 25 wherein said anti-abuse substance includes an amount of an irritant.

20 33. A method as in claim 25 wherein said anti-abuse substance includes an amount of a co-soluble antagonist.